

Foil change in BTA on 7/10/2008

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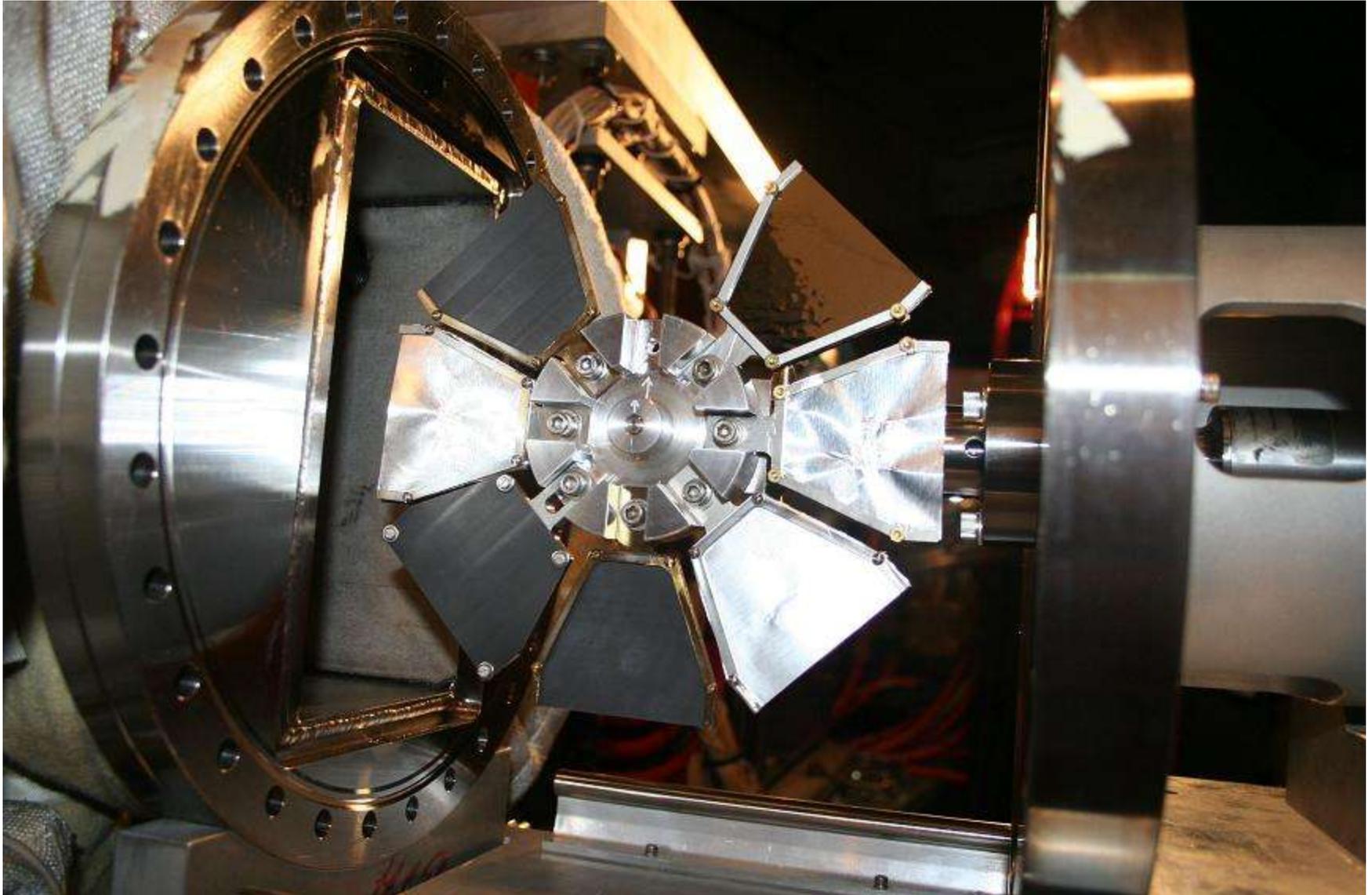
BTA foils mounted on August 17, 2007

#	Material	mg/cm ²	Status
1	Empty	0.0	Unchanged
2	Carbon .003"	13.9	Unchanged
3	Al and C	6.42 + 8.68	New
4	Carbon .005"	23.1	Unchanged
5	Carbon .005"	23.1	Unchanged
6	Al and C	6.45 + 8.39	New
7	Al and C	6.35 + 8.48	Unchanged
8	Carbon C	24.7	Unchanged

BTA foils mounted on July 10, 2008

#	Material	mg/cm ²	Status
1	Empty	0.0	Unchanged
2	Carbon .003"	13.9	Unchanged
3	Al and C	6.42 + 8.68	Used
4	Carbon .005"	23.1	Unchanged
5	Carbon .005"	23.1	Unchanged
6	Al and C	6.45 + 8.39	Unused
7	Al (C-coated) and C	6.32 + 8.50	New
8	Carbon C	24.7	Unchanged

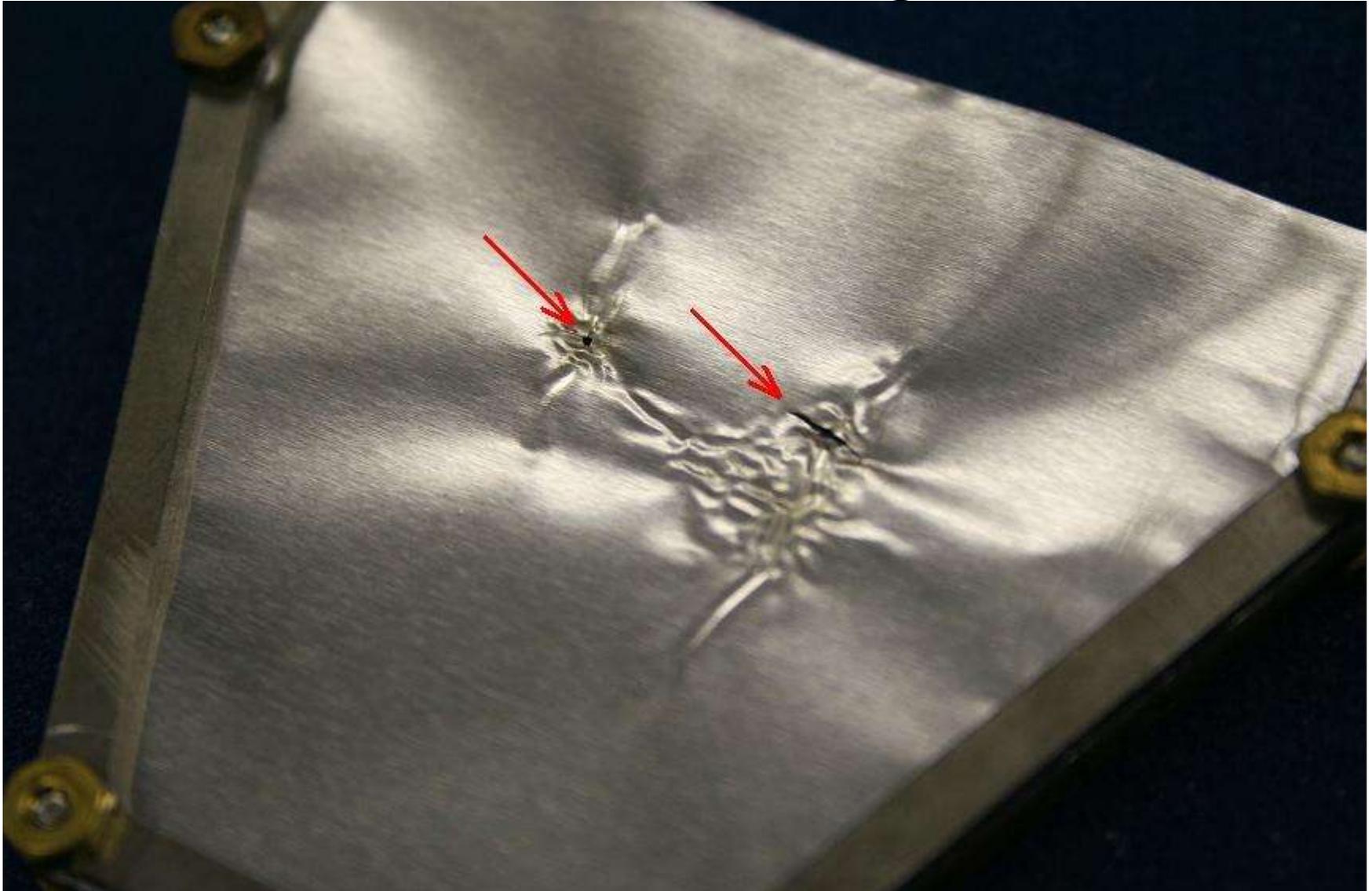
Foils #7 (right) and #3 (left) where used in last gold run



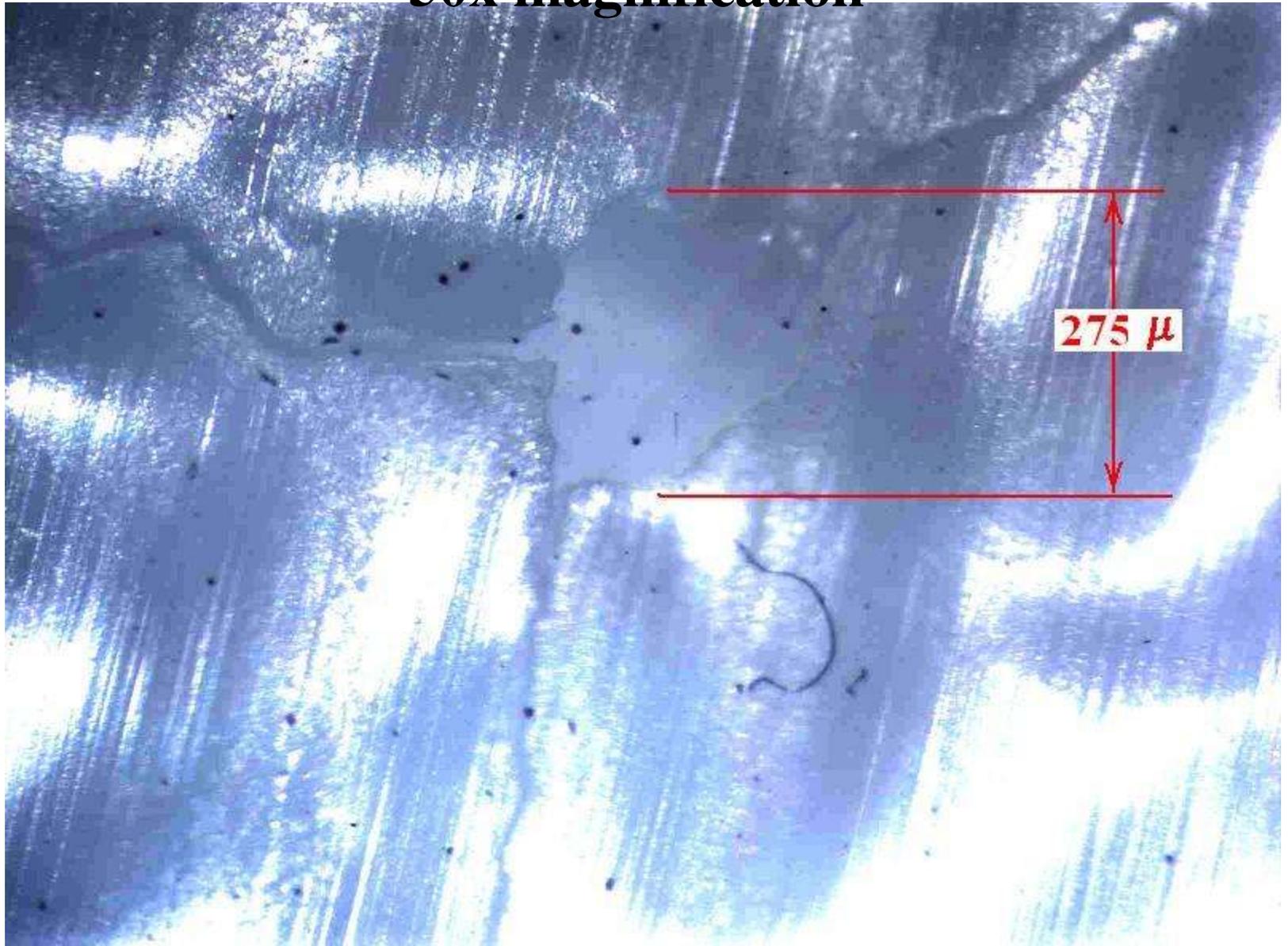
Foil #7 – Closer view



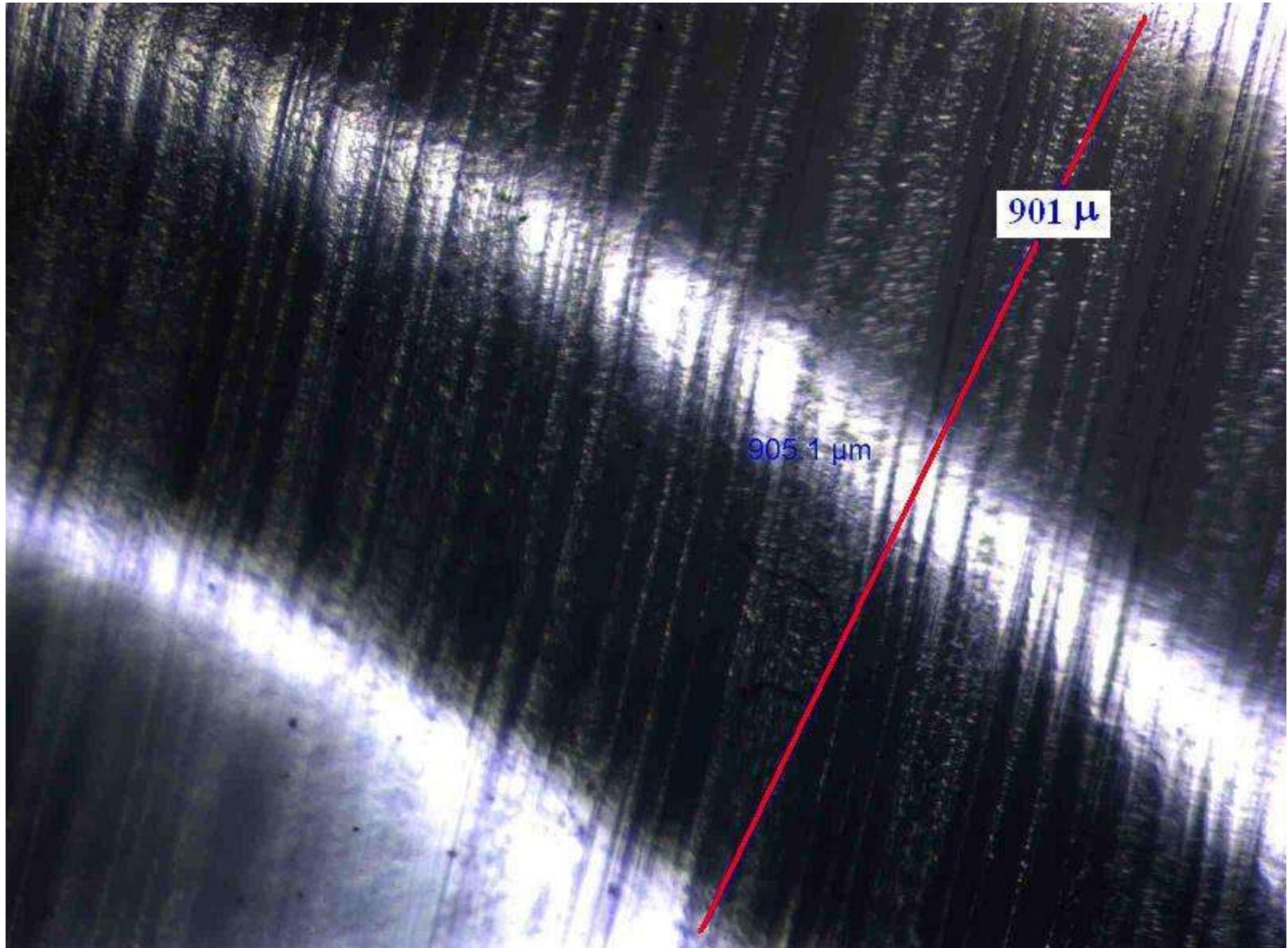
Old Foil #7 after taking it out. The arrows point to a small hole and to a large crack.



Cracks and 275 μ diameter hole recorded with 50x magnification

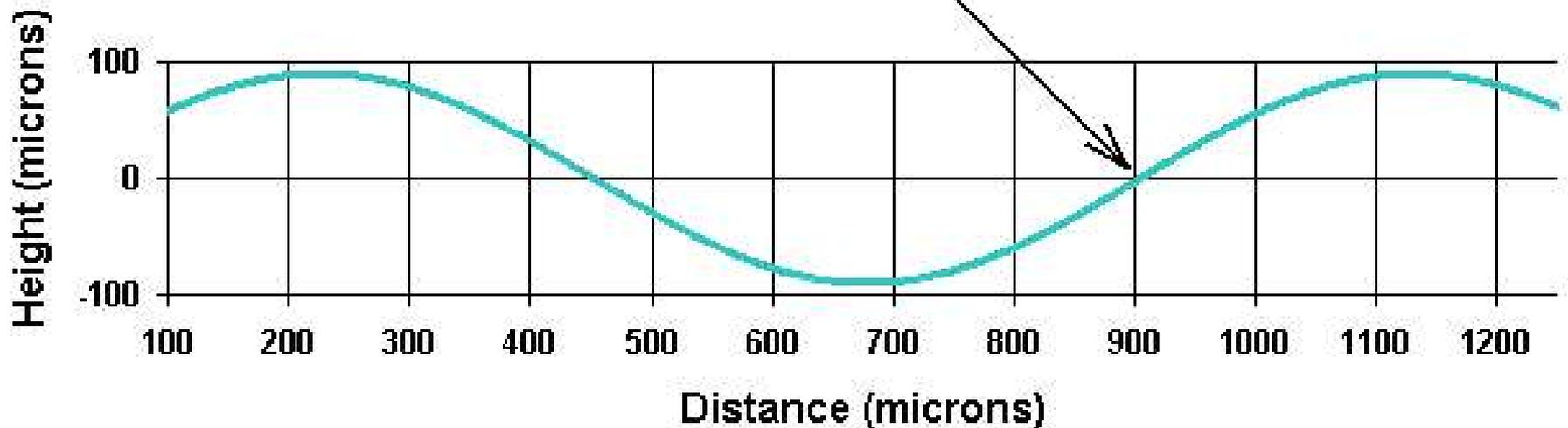


900 μ wide, 180 μ deep fold measured with 100x magnification. The central stripe is the crest, and the other two the valleys.



Sinusoidal approximation of the surface profile showing that the maximum variation in effective thickness is only $\sim 18\%$ i.e. $\pm 9\%$.

**~ 32 degree max. slope or
 $\sim 18\%$ max. thickness variation**



Conclusions

- There are now 3 usable Al-C strippers for gold installed in BTA of which two are unused.
- There is one spare stripper that has not been installed as insurance against catastrophe.
- The aluminum foils appear to undergo radiation damage (swelling and embrittlement).
- It is not clear that the carbon coating will help. We must be prepared for periodic replacements of these foils.
- The glassy carbon shows some evidence of swelling (slight bowing), but so far not enough to affect performance.